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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/199,127 11/24/98 ADDIS

M	1633-012B
EXAMINER	

PM82/0227
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60 EAST 42ND STREET SUITE 4000
NEW YORK NY 10165

ART UNIT	PAPER NUMBER
LUU, T	16

3627
DATE MAILED:

02/27/01

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 12-11-01 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-5, 7-19, 21-37 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☒ Claims 6 and 20 have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-5, 7-19, 21-37 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims X are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is an inconsistency between the language in the preamble and certain portions in the body of the claim(s), thereby making the scope of the claim unclear. The preamble in claim 10 clearly indicates that a subcombination is being claimed; however, the turbine is positively recited within the body of the claim.

Claim Rejections - 35 USC § 103

3. Claims 1, 10, 24, 29-32, and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,810,365 to Brandon et al. in view of UK Pat. GB 2,301,635 to Hemsley et al.

Brandon discloses a packing ring comprising a body portion having a bore (22) in an edge surface for accepting a spring (16). Brandon does not disclose a plurality of brush segments having a packet of bristles having tip portions trimmed to terminate along a radius of curvature continuously extending along the longitudinal extent of the body portion so as to form a labyrinth seal. Hemsley discloses a packing ring comprising a plurality of brush segments having a packet of bristles (34) having tip portions trimmed to terminate along a radius of curvature continuously extending along the longitudinal extent of the body portion so as to form a labyrinth seal. It would

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have been obvious to one of ordinary skill in the art at the time the invention was made to combine the brushes as taught by Hemsley with the invention of Brandon so that bending of the bristles absorb transient deviation of the shaft from its normal running position to nullify any effects of wear on the shaft and prevent local heating leading to axial stresses which could bend the shaft (Hemsley, page 5, lines 1-5). Hemsley discloses the bristles are mounted in a groove (33).

Brandon discloses apertures (23a) in at least one of the segments to permit the free flow of working fluid into the seal ring groove, and teeth (14) attached to an inner arcuate surface. The shaft has raised areas cooperating with the teeth.

4. Claims 2, 3, 11, 12, 14, 25, 26, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,810,365 to Brandon et al. in view of UK Pat. GB 2,301,635 to Hemsley et al. as applied to claims 1, 10, 24, and 32 above and further in view of U.S. Pat. No. 5,316,318 to Veau.

Brandon as modified by Hemsley discloses the invention discussed above but does not disclose the bristles are bound between a pair of plates having an incised channel to receive the base end portion of the bristles. Veau discloses bristles (10) bound between a pair of plates (12, 13) having an incised channel (at 10) to receive the base end portion of the bristles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the bristles to the seal disclosed by Brandon and Hemsley with the plates disclosed by Veau. Hemsley discloses the bristles are held by "appropriate fastening means" such as "spring clips, a clamp arrangement or an adhesive appropriate to the particular environment" (page 4, lines 15-20). The plates disclosed by Veau are an obvious clamp arrangement for fastening the bristles.

The plates of each brush segment have a bottom edge surface with a radius of curvature adapted to conform to a radius of curvature of a groove formed in the vertical portion. The back plate (12) has an extent towards the shaft beyond the front plate to provide support for the bristles (see figs. 2A, 2B).

5. Claims 4, 13, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,810,365 to Brandon et al. in view of UK Pat. GB 2,301,635 to Hemsley et al. as applied to claims 1, 10, and 24 above and further in view of U.S. Pat. No. 6,010,132 to Bagepalli et al.

Brandon as modified by Hemsley discloses the invention discussed above but does not disclose the bristles within each brush segment are bound within a channel by a core strip securing the bristles within the channel. Bagepalli discloses bristles bound within a channel by a core strip (60, fig. 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to secure the bristles to the seal disclosed by Brandon and Hemsley with the core strip disclosed by Bagepalli. Again, Hemsley discloses the bristles are held by "appropriate fastening means" such as "spring clips, a clamp arrangement or an adhesive appropriate to the particular environment" (page 4, lines 15-20). The core strip disclosed by Bagepalli is an obvious clamp arrangement for fastening the bristles.

6. Claims 5, 7, 8, 9, 15, 21-23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,810,365 to Brandon et al. in view of UK Pat. GB 2,301,635 to Hemsley et al. and U.S. Pat. No. 5,547,340 to Dalton et al.

Brandon as modified by Hemsley discussed above discloses the claimed seal ring but does not disclose the structure of the turbine in combination with the seal. However, Dalton discloses a turbine having the claimed structural features in combination with a seal (20A). Thus,

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it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute one well known turbine for another known turbine.

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,810,365 to Brandon et al. in view of UK Pat. GB 2,301,635 to Hemsley et al. and U.S. Pat. No. 5,547,340 to Dalton et al. as applied to claim 15, above and further in view of U.S. Pat. No. 5,316,318 to Veau.

Brandon as modified by Hemsley and Dalton discloses the invention discussed above but does not disclose the bristles are bound between a pair of plates having an incised channel to receive the base end portion of the bristles. Veau discloses bristles (10) bound between a pair of plates (12, 13) having an incised channel (at 10) to receive the base end portion of the bristles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the bristles to the seal disclosed by Brandon and Hemsley with the plates disclosed by Veau. Hemsley discloses the bristles are held by "appropriate fastening means" such as "spring clips, a clamp arrangement or an adhesive appropriate to the particular environment" (page 4, lines 15-20). The plates disclosed by Veau are an obvious clamp arrangement for fastening the bristles

8. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,810,365 to Brandon et al. in view of UK Pat. GB 2,301,635 to Hemsley et al. and U.S. Pat. No. 5,547,340 to Dalton et al. as applied to claim 15, above and further in view of U.S. Pat. No. 6,010,132 to Bagepalli et al.

Brandon as modified by Hemsley and Dalton discloses the invention discussed above but does not disclose the bristles within each brush segment are bound within a channel by a core strip securing the bristles within the channel. Bagepalli discloses bristles bound within a channel

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by a core strip (60, fig. 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to secure the bristles to the seal disclosed by Brandon and Hemsley with the core strip disclosed by Bagepalli. Again, Hemsley discloses the bristles are held by "appropriate fastening means" such as "spring clips, a clamp arrangement or an adhesive appropriate to the particular environment" (page 4, lines 15-20). The core strip disclosed by Bagepalli is an obvious clamp arrangement for fastening the bristles.

Response to Arguments

9. Applicant's arguments filed December 11, 2000 have been fully considered but they are not persuasive.

As concerns the 35 U.S.C. 112, second paragraph rejection, the body of the claim positively recites the turbine. In order to overcome this rejection, it is suggested that applicant amend the claim to functionally recited the turbine, i.e., "each said packing ring ***adapted to be mounted*** in a groove circumferentially in said diaphragm".

10. The declaration under 37 CFR 1.132 filed December 11, 2000 is insufficient to overcome the rejection of claims 1-5, 7-19, and 21-28 based upon the Hemsley and Brandon patents as set forth in the last Office action because:

It refers only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

Furthermore, it include(s) statements which amount to an affirmation that the affiant has never seen the claimed subject matter before. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See MPEP § 716.

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In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Teri Pham Luu** whose telephone number is **(703) 305-7421**. The examiner can normally be reached Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **BethAnne Dayoan**, can be reached at **(703) 308-3865**.

Submission of your response by facsimile transmission is encouraged. Group 3620's facsimile number is **(703) 305-3597**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see MPEP § 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitted by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP § 512). The following is an example of the format the certification might take:

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I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-3597) on _____ (Date)

(Typed or printed name of person signing this certificate)

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP § 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be directed to **bethanne.dayoan@uspto.gov**.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed expressed waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist at **(703) 308-2168**.



TERI PHAM LUU
PRIMARY EXAMINER

tpl
February 26, 2001